

## Undescribed Species of Crane Flies From the Himalaya Mountains (Diptera: Tipulidae), XII<sup>1</sup>

CHARLES P. ALEXANDER

AMHERST, MASSACHUSETTS

**Abstract:** Six new species of the Eriopterine genera *Ormosia* and *Erioptera* are described, including *Ormosia* (*Oreophila*) **licina** n. sp., from Kashmir and Kumaon, and *Ormosia* (*Parormosia*) **atrotibialis** n. sp., *Ormosia* (*Ormosia*) **subpulchra** n. sp., and *O.* (*O.*) **umbripennis** n. sp., from Sikkim; *Erioptera* (*Ilisia*) **diadexia** n. sp. and *E.* (*I.*) **epicharis** n. sp., from Sikkim.

Part XI of this series of papers was published in the Journal of the New York Entomological Society, **73**: 163–167, 1965. The materials upon which the new species are based were collected by Dr. Fernand Schmid, of Ottawa, to whom I express my deepest appreciation for this outstanding series of Asiatic Tipulidae.

Doctor Schmid collected insect specimens in India and adjoining countries between 1953 and 1961 as a member of the Swiss Zoological Expedition. His insect collections were restricted to certain groups, where they proved to be of paramount importance in making known the exceedingly rich fauna of the region. A summary of the stations visited, as they pertain to the crane flies, is given in a paper by the writer (Philippine Jour. Sci., 90: 163; 1961), covering the period between 1953 and 1960. Between February and October, 1961, still further collections were made by Doctor Schmid in the Kameng Frontier Division of the North East Frontier Agency (NEFA), Assam.

In the crane fly materials several hundred new species were included that have been discussed and presently are being described in a long series of papers that are summarized herewith in order to assist other students of the subject:

Philippine Jour. Sci. (chiefly Tipulinae and Limoniini)

Ann. and Mag. Nat. Hist. (London) (chiefly Tipulinae and Eriopterini)

Proc. Royal Ent. Soc. London (Pedicini)

Trans. Royal Ent. Soc. London (Hexatomini; *Phyllolabis*)

Bull. Brooklyn Ent. Soc. (Tanyderidae, Ptychopteridae, Trichoceridae)

Jour. N. Y. Ent. Soc. (chiefly Eriopterini)

Ent. News (Hexatomini)

Trans. Amer. Ent. Soc. (Eriopterini)

### *Ormosia* (*Oreophila*) **licina** n. sp.

General coloration of mesonotum light brown, sparsely pruinose, pleura yellow; antennae moderately long; wings yellowed, very restrictedly patterned with pale brown, vein *2nd A* sinuous; male hypopygium with the outer dististyle black, coarsely spinulose; lateral margins of gonapophyses produced into two or three acute points.

<sup>1</sup> Contribution from the Entomological Laboratory, University of Massachusetts.

MALE: Length about 4.8–5 mm; wing 5.8–6 mm; antenna about 1.5–1.6 mm.

FEMALE: Length about 5 mm; wing 6 mm.

Rostrum light yellow; palpi pale brown. Antennae of male moderately long, scape obscure yellow, the remainder black; flagellar segments oval to long-oval, shorter than their verticils. Head light gray.

Thorax light brown, sparsely pruinose, pronotum more yellowed, pretergites clear yellow. Pleura and lateral prescutal borders light yellow. Halteres yellow. Legs with coxae and trochanters yellow; remainder of legs yellowish brown, femora more yellowed basally, tarsi brownish black. Wings yellowed, very restrictedly patterned with pale brown, including the stigma, cord, outer end of cell *1st M*<sub>2</sub>, and small spots at *Sc*<sub>2</sub> and origin of *Rs*. Venation: *Sc*<sub>1</sub> ending nearly opposite the fork of *R*<sub>2+3+4</sub>, *Sc*<sub>2</sub> far retracted, about opposite one-third to two-fifths *Rs*; vein *R*<sub>2</sub> close to fork of *R*<sub>2+3+4</sub>; cell *1st M*<sub>2</sub> elongate, subequal to distal section of *M*<sub>1+2</sub>; vein *2nd A* sinuous. One wing of the holotype has cell *M*<sub>2</sub> open by atrophy of the basal section of *M*<sub>3</sub>.

Abdominal tergites brown, basal sternites paler. Male hypopygium with the dististyles slightly subterminal, broadly united basally; outer style blackened, relatively short and stout, the outer half with numerous strong spinules; inner style pale, relatively short, the outer margin with a strong lobe before midlength. Phallosome with lateral margins of outer apophyses produced into two or three acute points; aedeagus short, black.

HOLOTYPE ♂, Dakwani, Pauri Garhwal, Kumaon, 9,300–11,000 feet, August 5, 1958 (Schmid). Allotopotype, ♀, pinned with type. Paratypes, ♂ ♀, Gangrea, Pauri Garhwal, 7,500–10,000 feet, June 12, 1958; 1 ♂, Tales, Kashmir, August 13, 1954 (Schmid).

*Ormosia (Oreophila) lieina* is most similar to *O. (O.) hutchinsonae* Alexander, which differs in the coloration, venation, as the short straight vein *2nd A*, and in the structure of the hypopygium, especially the phallosome and the elongate dististyle.

*Ormosia (Parormosia) atrotibialis* n. sp.

Generally similar and closely allied to *Ormosia (Parormosia) leucoplaga* Alexander, differing in the coloration of the legs in the male.

MALE: Length about 4.5–5 mm; wing 5.2–5.6 mm.

FEMALE: Length about 5 mm; wing 5.8 mm.

Antennae light yellow, in cases with the intermediate flagellar segments bicolored, their bases narrowly dark brown, the outer two-thirds to three-fourths yellow. Mesonotal prescutum obscure yellow with a more or less distinct capillary brownish black median line; scutum brown, scutellum and postnotum darker. Legs black in both sexes, the tips of the femora narrowly yellow, including about the outer tenth of segment, extreme tibial bases more narrowly yellowed. In *leucoplaga* the tibiae and basitarsi of male yellow, of the female black, as in the present fly.

HOLOTYPE ♂, Lachen, Sikkim, 8,900 feet, June 13, 1959 (Schmid). Allotopotype, ♀. Paratopotypes, 4 ♂ ♀; paratypes, 1 ♂, 2 ♀ ♀, Lachung Sikkim, 8,610 feet, July 2, 1959 (Schmid).

*Ormosia (Ormosia) subpulchra* n. sp.

Allied to *puchra*; general coloration of thorax gray, prescutum with a broad brown

central stripe, humeral region yellowed; femora yellow with two subequal broad brownish black rings, the outer one nearly apical; wings whitened, with conspicuous pale brown clouds; male hypopygium with both dististyles extended into acute blackened points; gonapophyses appearing as a massive black triangular head, its outer margin with three strong spines.

MALE: Length about 4.5 mm; wing 5.3 mm.

Head broken. Pronotal scutum dark brownish gray, scutellum testaceous yellow. Mesonotal prescutum gray, with a broad brown central stripe that is narrowly darker medially; humeral region, including the pseudosutural foveae, yellow, tuberculate pits very reduced; posterior sclerites of notum dark brown, sparsely pruinose. Pleura dark gray, the yellow setae of the posterior pteropleurite very long. Halteres broken. Legs with coxae dark brown; trochanters obscure yellow; femora yellow, each with two subequal broad brownish black rings that are about equal to the pale base or intervening interspace, the tip narrowly yellow; remainder of legs light brown. Wings with the ground color whitened, with conspicuous pale brown clouds chiefly in the outer three-fourths, stigma darker; whitened marginal spots in cells  $R_2$ ,  $R_3$ , and  $R_4$ , less evident in cells  $R_5$  and  $2nd\ M_2$ , larger in cells  $M_3$ ,  $Cu$  and the anals; cells basad of cord more extensively whitened; veins brown, prearcular field and  $Sc$ ,  $R$ , and  $Cu$  more yellowed. Venation:  $R_2$  at fork of  $R_{2+3+4}$ ; cell  $2nd\ M_2$  square at base; vein  $2nd\ A$  strongly sinuous, close to border on outer end.

Abdomen, including hypopygium, brownish black. Male hypopygium with apical end of tergite short and broad, the lobes low. Both dististyles extended into acute blackened points. Gonapophysis appearing as a massive blackened triangular head, the basal stem relatively slender, outer margin with three strong spines, with a further series of about four microscopic denticles on lower margin near the stem.

HOLOTYPE a broken ♂, mounted on microscope slide, Zema, Sikkim, 9,100 feet, June 14, 1959 (Schmid).

*Ormosia (Ormosia) subpulchra* is related to *O. (O.) kashmiri* Alexander and *O. (O.) pulchra* (Brunetti), all three species differing among themselves chiefly in important characters of the male hypopygium.

*Ormosia (Ormosia) umbripennis* n. sp.

General coloration of head and thorax brownish black; palpi, antennae, halteres, and legs black; wings strongly infuscated;  $Sc_2$  beyond midlength of  $R_s$ , cell  $1st\ M_2$  shorter than vein  $M_4$ , vein  $2nd\ A$  gently sinuous.

FEMALE: Length about 6 mm; wing 6.5 mm; antenna about 1.6 mm.

Rostrum and palpi black. Antennae black throughout; flagellar segments long-oval, with dense white setae, the verticils longer than the segments. Head brownish black.

Thorax uniformly very dark brown to brownish black, the surface of mesonotum subnitidous; prescutum and scutellum with a few long setae. Halteres brownish black, base of stem obscure yellow. Legs black. Wings strongly infuscated, especially the prearcular and costal fields and the stigma; veins brown. Venation:  $Sc_1$  ending opposite the oblique  $R_2$ ,  $Sc_2$  moderately retracted, about opposite three-fifths the long  $R_s$ ;  $R_{2+3+4}$  shorter than basal section of  $R_5$ ; cell  $1st\ M_2$  shorter than vein  $M_4$ ;  $m-cu$  at fork of  $M$ , perpendicular and slightly sinuous; vein  $2nd\ A$  gently wavy.

Abdomen brown, the outer segments more blackened. Ovipositor with cerci horn yellow, long and slender, gently upcurved to the acute tips.



HOLOTYPE ♀, Namnasa, Sikkim, 10,000 feet, July 1, 1959 (Schmid).

The only other generally similar regional species is *Ormosia (Ormosia) nyctopoda* Alexander, of Pakistan, which similarly has the legs black but with the wings pale and having the venational details distinct.

*Erioptera (Ilisia) diadexia* n. sp.

Allied to *asymmetrica*; general coloration of thorax gray, the prescutum with two diffuse brown stripes; antennae black; femora brownish yellow, tips brownish black; wings brownish yellow, conspicuously patterned with brown spots and dots, the latter on all veins excepting *Sc* and *Cu*; male hypopygium with the outer dististyle bilobed, inner style broad, yellow, and the tip very obtuse; gonapophyses with the two arms virtually identical, appearing as straight blackened rods, the tip microscopically toothed.

MALE: Length about 5–6.5 mm; wing 5.8–8 mm.

Rostrum gray, palpi black. Antennae relatively long, black; flagellar segments long-oval to fusiform, basal segments with long verticils, all with further dense pale setulae. Head brownish gray.

Prothorax brownish gray; anterior pretergites obscure yellow. Mesonotal prescutum brownish gray, the interspaces more infuscated to form two diffuse stripes; posterior sclerites of notum brownish gray, central area of scutum narrowly brown. Pleura brownish gray. Halteres with stem yellow, knob weakly infuscated. Legs with coxae brownish gray; trochanters brownish yellow; femoral and tibiae brownish yellow, tips brownish black, the tibiae slightly enlarged and darkened beyond bases; basitarsi light brown, remainder of tarsi black. Wings brownish yellow, conspicuously patterned with brown spots and dots, the former including about five costal areas, the second over *Sc*<sub>2</sub>, the third largest, over tip of *Sc*<sub>1</sub> and *R*<sub>2</sub>, fourth area at tip of *R*<sub>1+2</sub>; smaller marginal spots at ends of all longitudinal veins; narrow brown seams over cord, *m*, arculus, and at near midlength of *Cu*<sub>1</sub>; paler brown spots on all longitudinal veins excepting *Sc* and *Cu*, those basad of cord paler; veins yellow in the ground areas, brown in the patterned markings. Venation: *R*<sub>2+3+4</sub> about twice *R*<sub>2+3</sub>, *R*<sub>1+2</sub> nearly as long as *Rs*; *m-cu* far before fork of *M*; vein 2nd *A* straight.

Abdomen brownish black. Male hypopygium with inner apical angle of basistyle produced, with very long setae. Dististyles subterminal, the outer style blackened, bilobed, the outer lobe a slender paddlelike blade, its tip obtuse, outer end with delicate setae, inner arm a shorter blade that is dilated outwardly, apex broadly obtuse to truncate; inner style pale, broadly flattened, apex very obtuse to bluntly triangular, surface with long yellow setae. Gonapophysis with the two arms virtually identical in length and diameter, appearing as straight blackened rods, the tips microscopically toothed.

HOLOTYPE ♂, Chachu, Sikkim, 11,500 feet, June 29, 1959 (Schmid). Paratype, ♂, Darkot, Kashmir, 8,900 feet, August 17, 1954 (Schmid).

The most similar described regional species is *Erioptera (Ilisia) fausta* Alexander, which is generally similar in coloration of the body and wings, differing most evidently in the hypopygial structure, including the trilobed outer dististyle, slender arcuated inner style, and the unequal arms of the gonapophysis. The paratype from Kashmir is much smaller (the smallest measurements given) but the hypopygium is so similar to that of the type that I regard it as being conspecific.

*Erioptera (Ilisia) epicharis* n. sp.

Allied to *asymmetrica*; general coloration of thorax brownish gray, the prescutum faintly patterned with darker; halteres yellow; femora darkened, tips brownish black, preceded by a yellow ring; wings whitish yellow with a conspicuous brown pattern, including large costal darkenings and paler brown areas in the anal field, the discal areas restricted; male hypopygium with the outer dististyle trilobed, the inner oval blade with a blackened spur at base, inner dististyle extended into a point at apex; gonapophysis unequally bifid.

MALE: Length about 6.5 mm; wing 7.5 mm.

FEMALE: Length about 6.5 mm; wing 8 mm.

Rostrum brownish gray; palpi black. Antennae relatively long, brownish black, the bases of proximal flagellar segments narrowly paler; segments elongate, a little shorter than the verticils. Head brownish gray.

Pronotum brownish gray, scutum darker laterally, sides of scutellum yellow. Mesonotum brownish gray, the prescutum with a poorly indicated pale brown stripe, narrowly darkened in front and on the sides behind; pseudosutural foveae and tuberculate pits black, shiny. Pleura gray. Halteres pale yellow. Legs with coxae and trochanters pale brown; femora light brown to brownish black, tips broadly brownish black, preceded by a broad yellow ring; tibiae and tarsi pale brown. Wings very pale whitish yellow, clearer yellow in the costal interspaces; a conspicuous brown pattern that is chiefly marginal in distribution, including six darker costal areas that are more extensive than the interspaces, the larger markings at origin of *Rs* and over tip of *Sc*<sub>1</sub>, the last area at the wing tip; cubital and anal fields with comparable large paler brown markings, most extensive in the anal cells, small brown marginal spots on veins *M*<sub>2</sub> through *M*<sub>4</sub> narrow darker brown seams over cord, outer end of cell 1st *M*<sub>2</sub>, and isolated at near midlength of vein *Cu*, with small dots along vein *R*<sub>5</sub>; veins light yellow in the ground, dark brown in the patterned areas, in cases including series of four or five dashes. Venation: *Sc*<sub>1</sub> ending shortly beyond *R*<sub>2</sub>; *m* transverse, about one-third to one-half the basal section of *M*<sub>3</sub>; *m-cu* before fork of *M*; vein 2nd *A* nearly straight.

Abdomen dark brown, including the hypopygium. Ovipositor with valves light horn yellow. Male hypopygium with posterior border of tergite nearly truncate, at midregion with two small paired darkened lobes, separated by a tiny V-shaped emargination, densely set with microscopic spicules. Apex of basistyle produced beyond insertion of the dististyles. Outer dististyle trilobed, the outer blade longer, pale yellow, with abundant very delicate pale setae, those at apex longer; inner arm including an oval to subcircular darkened blade with a blackened spur at its base; inner style yellow, the lower apical angle produced into a point, surface with pale setae, some of the outer ones very long. Phallosome including bifid gonapophyses, the lateral arm an erect blackened rod, its margin nearly smooth in the holotype, microscopically roughened in the Kumaon paratype; inner arm much smaller, at apex dilated into a triangular head; aedeagus appearing as two short slightly divergent spines.

HOLOTYPE ♂, Yagtang, Sikkim, in *Rhododendron* association, 11,200 feet, May 28, 1959 (Schmid). Allotopotype, ♀. Paratopotype, ♀, with the types, 11,600 feet, June 17, 1959; paratypes, ♂ ♀, Chachu, Sikkim, 11,500 feet, June 29, 1959; Chamiteng, Sikkim, 9,900 feet, August 24, 1959; Gey, Sikkim, in *Rhododendron* association, May 18, 1959; Lachung, 8,610 feet, July 10, 1959; Namnasa, Sikkim, 9,500 feet, July 13, 1959; Talam, Sikkim, in *Rhododendron* association, 11,300 feet, June 16, 1959; Tsomgo, Sikkim, in *Rhododendron* association,

12,500 feet, August 26, 1959; Dakwani, Pauri Garhwal, Kumaon, 9,300–11,000 feet, August 5, 1959; Kanol, Pauri Garhwal, 8,530 feet, August 19, 1958; Kulara, Pauri Garhwal, 12,000 feet, August 4, 1958 (Schmid).

*Erioptera (Ilisia) epicharis* is quite distinct from the other known regional species of the subgenus, including *E. (I.) asymmetrica* Alexander (*indica* Senior-White), *E. (I.) diadexia* n. sp., and *E. (I.) fausta* Alexander, especially in the wing pattern and hypopygial structure. One male paratype from Tsomgo is smaller (length about 5 mm; wing 5.2 mm) and has the femora almost uniformly darkened but from the wing pattern and hypopygium evidently pertains to this species.

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